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Case report

Mesh repair of a coccygeal hernia via an abdominal approach

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We report on the presentation and management of a patient with herniation of the rectum following a coccygectomy. We used an abdominal approach and careful pelvic dissection to define the defect in the pelvic floor at the site where coccyx used to be. Prolene mesh repair resulted in the reduction of the hernia. To our knowledge, this is the first report on the mesh repair of the coccygeal hernia via an abdominal approach.

Key words: Mesh repair – Coccygeal hernia – Abdominal approach – Prolene

A 70-year-old women presented in February 1990 with a long-standing history of pain in the coccygeal area. Physical examination revealed tenderness over the coccyx. Plain X-rays showed evidence of sacro-coccygeal arthritis. She was treated with anti-inflammatory drugs; local injection of steroids and manipulation but her symptoms progressed.

In February 1995, she underwent a coccygectomy distal to S5. Postoperatively, she developed an *Escherichia coli* wound infection, which required treatment with local dressings and antibiotics. Five months later, the patient noted a bulge in the coccygeal area that reduced with sitting or by compressing the coccygeal region against a hard surface.

In August 1997, she had developed a noticeable bulge in the coccygeal area, which would not reduce completely. She experienced pain on walking and difficulty in evacuating her rectum. She was referred to our colorectal unit for assessment. Magnetic resonance imaging (MRI) showed a defect in the pelvic floor at the site where the coccyx used to be (Fig. 1). The distal third of the rectum was seen herniating through the defect on the defecating proctogram (Fig. 2). The patient underwent repair of the hernia via an abdominal approach. The rectum was mobilised laterally and posteriorly in the mesenteric plane. The defect was identified and a prolene mesh was sutured to the edges of the hernial orifice with non-absorbable sutures. The rectum was allowed to fall backwards onto the mesh repair. The patient was discharged on the sixth postoperative day without any symptoms. At 6 months follow-up, the patient was asymptomatic with no recurrence of the hernia.

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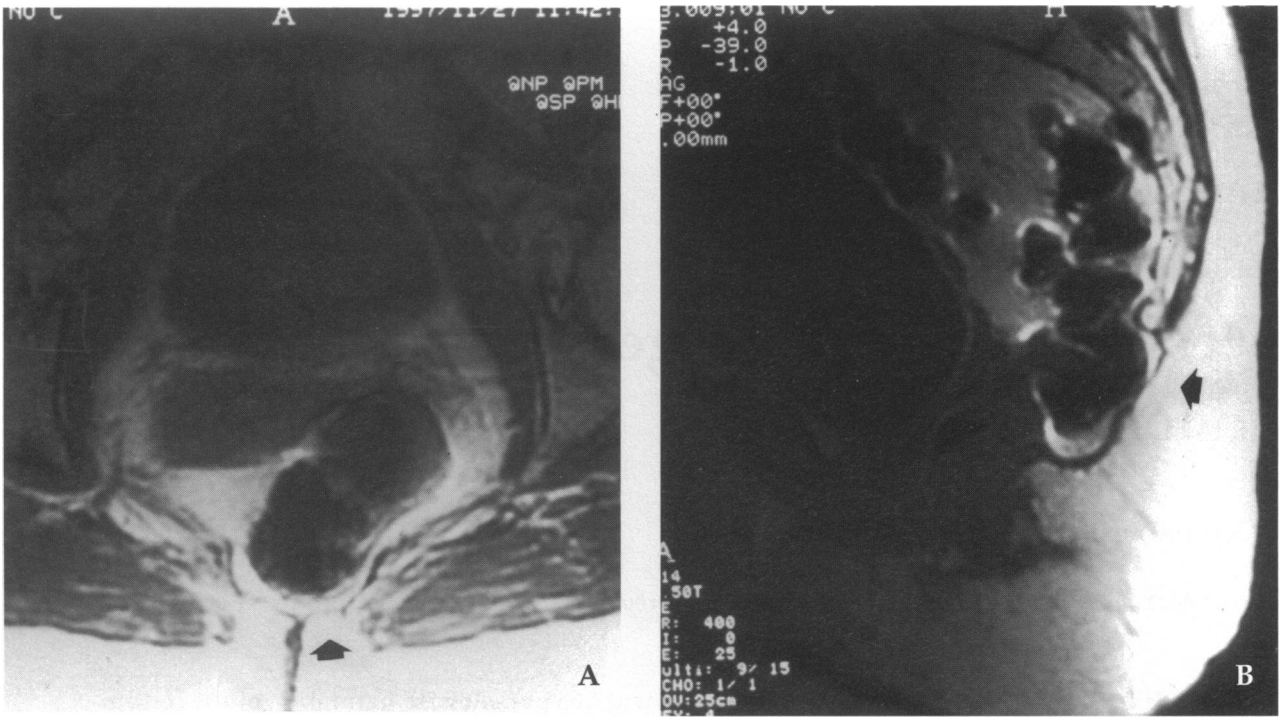

Figure 1 (**A**) Axial view of magnetic resonance imaging showing defect in the levator ani at the site of coccyx (pointed by black arrow). (**B**) Sagital view of magnetic resonance imaging showing hernial sac with herniating rectum below the lower end of sacrum (pointed by black arrow)

Discussion

Coccygectomy is a recognised treatment for coccydynia, a condition characterised by pain in the coccygeal area associated with local tenderness on rectal examination.[1] However, it has a high failure rate of 10%[1] and various postoperative complications, such as bowel herniation as seen in our patient. The limited literature on coccygectomy discuss the few successes,[2,3] but fail to mention its complications and treatment.

Following coccygectomy, our patient suffered from bowel herniation associated with symptoms of pain and difficulty in emptying the rectum. Zook *et al*[4] reported a similar case of coccygeal hernia where mesh repair via sacral approach proved to be unsuccessful on two occasions. The first failure was probably due to technical reasons while the second failure was secondary to a postoperative wound infection. The authors described a third approach involving an extensive plastic reconstructive procedure where bilateral gluteus maximus muscle flaps were plicated in the midline, which reduced the patient's hernia successfully.

Figure 2 (left) Defecating proctogram showing posterior herniating of the lower third of the rectum below the lower end of the sacrum (pointed by white arrow)

Perineal hernia after abdominal perineal resection for rectal cancer has been reported and treated with prosthetic material.[5] The herniation in our patient was more posterior and superior. Repair of such a hernia via an abdominal approach has not been reported before. A simple mesh repair via an abdominal approach resulted in successful reduction of the hernia in our patient. This approach appears to be an effective way to tackle a coccygeal hernia as the defect can be clearly identified and healthy muscle margins are available to anchor the prosthetic mesh. Moreover there is much less risk of wound infection as compared to that of sacral approach.

References

1. Wray AR, Templetion J. Coccygectomy – a review of thirty-seven cases. *Ulster Med J* 1982; **51**: 121.
2. Pyper JB. Excision of the coccyx for coccycynia. *J Bone Joint Surg Br* 1957; **39**: 733–7.
3. Wilson JN. Watson-Jones N. *Fracture and Joint Injuries*, 5th edn. Edinburgh: Churchill Livingstone, 1967: 868.
4. Zook NL, Zook EG. Repair of a long-standing coccygeal hernia and open wound. *Plast Reconstr Surg* 1997; **100**: 96–9.
5. Porell W, Parsons L. Perineal hernia repair with nylon mesh. *Surgery* 1958; **43**: 447.